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LESSON OF THE MONTH

Focal Myositis – a New Presentation

K. L. R. Grace[1], Y. G. Wilson[1], C. M. P. Collins[3], J. R. Kirwan[2] and R. N. Baird*[1]

Departments of [1]Vascular Surgery, [2]Rheumatology and [3]Histopathology, Bristol Royal Infirmary, Bristol BS2 8HW, U.K.

This article is a case report and review of literature of a very rare condition, not previously written in general surgical literature, including a new presentation

Introduction

Focal myositis is a rare inflammatory process with a variable clinical presentation and difficult histopathological interpretation.[1] There are no reports of focal myositis presenting as compartment syndrome.

Case Report

A 36-year-old man presented with recurrent left calf swelling and medial lower leg pain. Examination confirmed gross lower leg swelling, tenderness, foot drop and diminished sensation. Pedal pulses were weak but the foot was viable. Five months earlier, lateral and posterior fasciotomies had been performed elsewhere for similar symptoms following minor injury.

The contralateral right leg had been amputated above the knee three years earlier for intractable pain. Similar presenting features had been treated as a deep-vein thrombosis, and fasciotomies had been required.

Investigations showed a raised C-reactive protein, 28 g/dl (<10). Plain X-rays revealed scattered calcification within the soft tissues suggesting chronic inflammation. Magnetic resonance imaging (MRI) demonstrated subcutaneous oedema, grossly thickened fascial planes and increased signal intensity indicating fluid over the medial head of gastrocnemius (Fig. 1a). A posterior compartment fasciotomy confirmed the MRI findings. A large quantity of liquid haematoma was released. The gastrocnemius and soleal muscle bellies were haemorrhagic and oedematous.

Fresh muscle biopsies revealed focal myositis, with lymphocytic infiltration, vasculitis, oedema and degenerative muscle fibres (Fig. 1b). Microscopy of formalin-fixed material was unhelpful.

Cyclophosphamide and prednisolone counteracted the intense vasculitis and the calf circumference was reduced by 5 cm within four days. He has required repeated pulsed therapy to maintain his remission and pain-free weight-bearing.

Discussion

Focal myositis exhibits no sex, age or race predominance. Only rarely is minor trauma the trigger. Symptoms of pain and swelling in the affected muscle are more common in the thigh than calf,[2] with one report of focal myositis subsequently affecting the contralateral leg.[3] Focal myositis has been misdiagnosed as infiltrating soft-tissue neoplasm, thrombophlebitis, local infection or infarction, and occasionally results in unnecessary surgery.[4] The usual course is of spontaneous regression. Flaiser *et al.*[2] reviewed 39 cases of focal myositis, of which 16 required treatment, usually prednisolone.

* Please address all correspondence to: R. N. Baird, Vascular Studies Unit, Level 7, Bristol Royal Infirmary, Bristol BS2 8HW, U.K.

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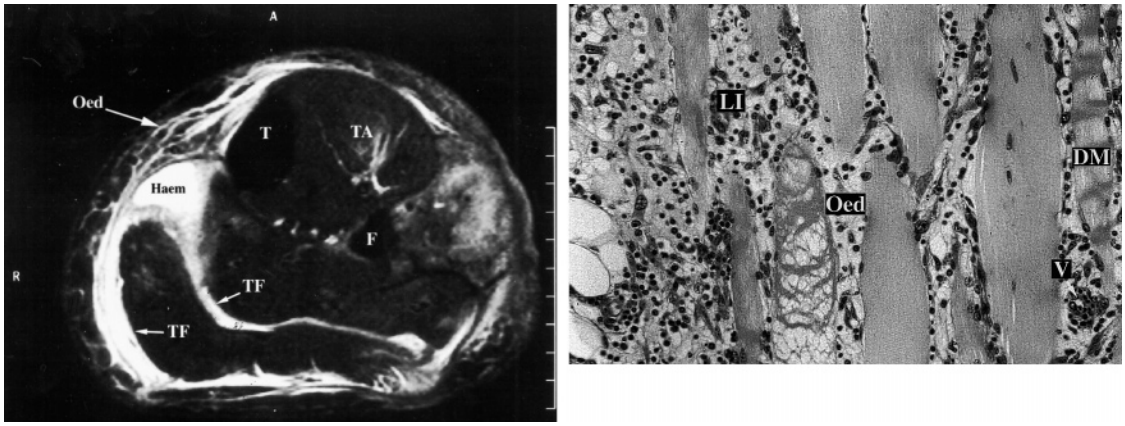

Fig. 1. (a) MRI STIR image of left lower leg in cross section, showing increased signal intensity in tibialis anterior muscle (TA), subcutaneous oedema (Oed), thickening of the fascial layers (TF) and haematoma around the medial head of gastrocnemius (Haem). T = tibia, F = fibula. (b) Haematoxylin and eosin ×250. Section from fresh muscle biopsy showing lymphocytic infiltration (LI), oedema (Oed), degenerative muscle (DM) and vasculitis (V).

MRI T2-weighted sequences and multiple percutaneous fresh muscle biopsies have both been advocated for the diagnosis of focal myositis.[5] In this case, STIR sequences were the most sensitive MR sequence and are being used to monitor the clinical course. The definitive diagnosis of focal myositis is by histological examination of fresh muscle biopsy.

References

1 Heffner RR, Armbrustmacher VW, Earle KM. Focal myositis. *Cancer* 1977; **40**: 301–6.

2 Flaiser F, Blin D, Ascencio G, Lopez F, Combe B. Focal Myositis: A localized form of polymyositis: *J Rheum* 1993; **20**: 1414–1416.

3 Finger D, Dennis JD. Letter to the editor: Focal Myositis. *J Rheum* 1995; **22**: 188.

4 Vercelli-Retta J, Ardao G, De Cabrera M. Focal myositis and its differential diagnosis. *Ann Pathol* 1988; **8**: 54–56.

5 Moreno-Lugris C, Gonzalez-Gay MA, Sanchez-Andrade A *et al*. Magnetic resonance imaging: a useful technique in the diagnosis and follow up of focal myositis. *Ann Rheum Dis* 1996; **55**: 856–858.

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